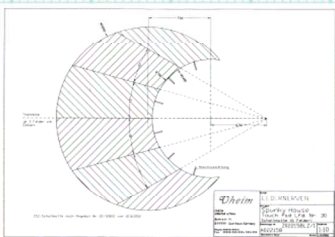
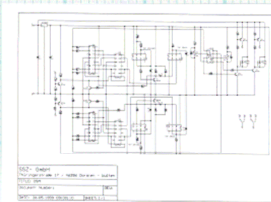
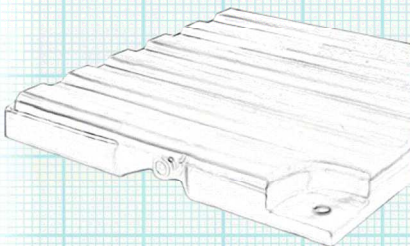
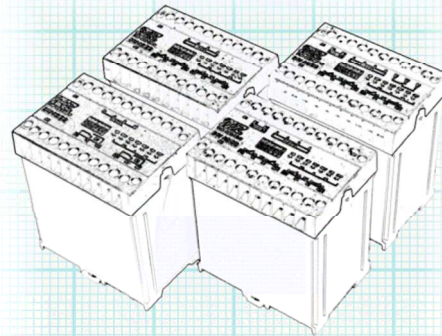
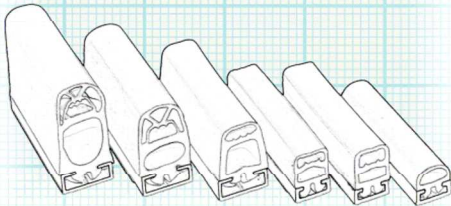
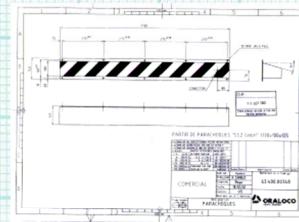
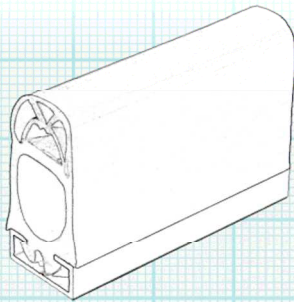
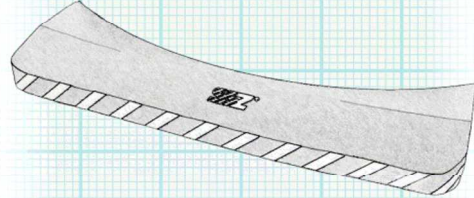
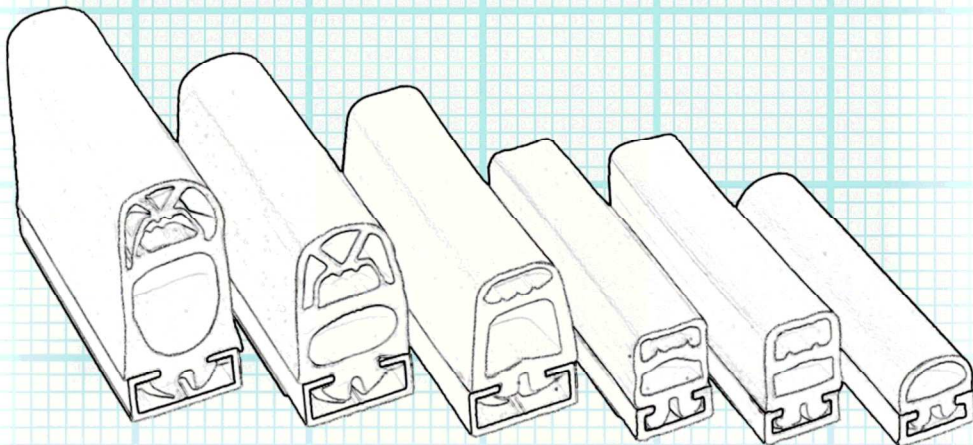
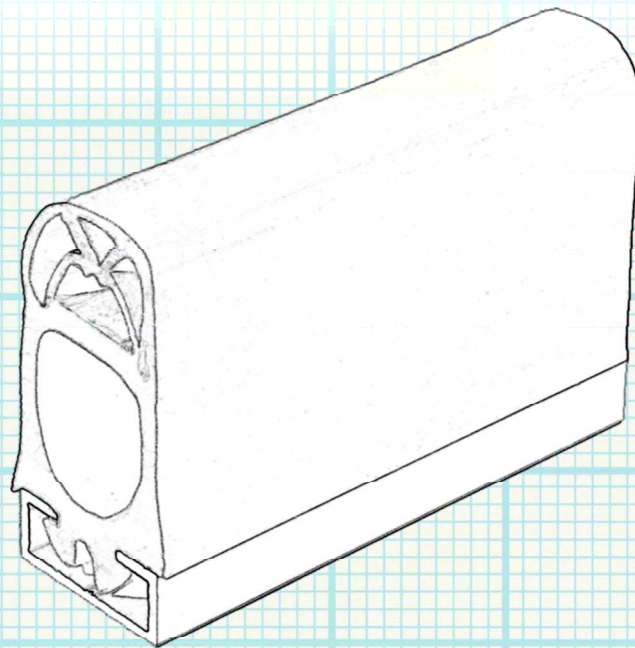


**Quality**



**Made in Germany**

# Safety Edges



# Safety Edges

Safety edges serve as protective devices on crushing and shearing points, which are formed, for instance, by automatically driven doors and gates.

When an automatically driven door moves closer, it creates dangerous space between the mobile piece and either an obstacle existing on the trajectory or the final position (fig. 1)

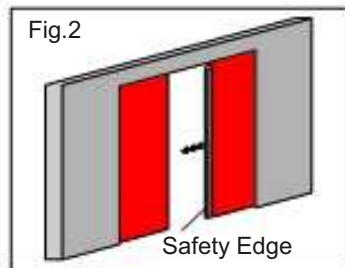
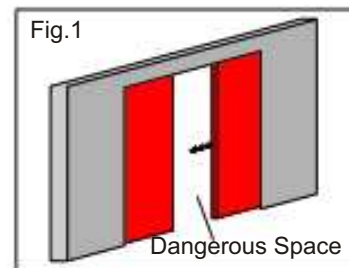
It is possible to safeguard that dangerous zone using a dead man's switch. However, while applying the dead man's switch it is no longer possible to use the door in an automatic mode of operation due to the fact that an operator will have to control movements by keeping on pressing a button. For this case the right solution is to use a safety-edge.

Application of a safety edge represents a more elegant Solution. The safety edge is installed on the mobile part of the door and connected to its control unit. Should the door move towards an obstacle, the switching signal will release and the emergency stop shall start.

In this way you can guarantee a safe automatic mode of operation.

While choosing a profile type, first of all you should determine the material.

By applying the safety edges outdoors it is more preferable to choose EPDM profiles, because it is UV and ozone resistant.



You shall choose the NBR quality, when you attach special weight to the oil resistance.

Having chosen the material, you shall determine the profile type. Here, you should consider the required over-travel (= the path covered by the hazardous piece after the release of the emergency stop)

In the end, you shall determine the cable outlet, two-sided in case of series connection of several safety edges or, if there is only one safety edge, one-sided.

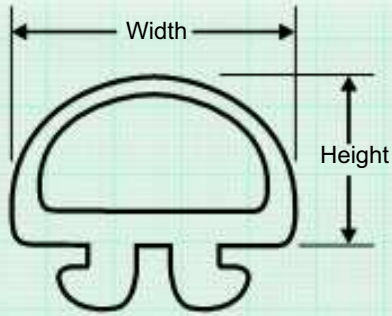
For special shapes, e.g. angle or bent safety edges, we kindly ask you to send us a drawing.

The below table shows the variety of materials. The over-travel can be taken from the individual datasheets.

## Resistance Table

	EPDM	NBR
Exhaust fumes	very good	conditional
Sewage	very good	sufficient
Acetone	very good	low
Steam resistance	very good	good
Fuel	low	good
Solvents	low	good
Mineral oils	low	very good
Ozone	very good	satisfactory
Acids	good	satisfactory
Petroleum benzene	low	very good
Weather resistance	very good	good

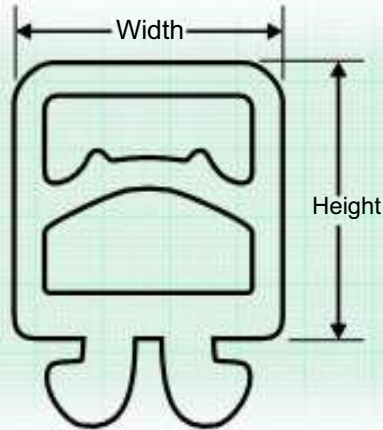
## Profile type 05 NBR



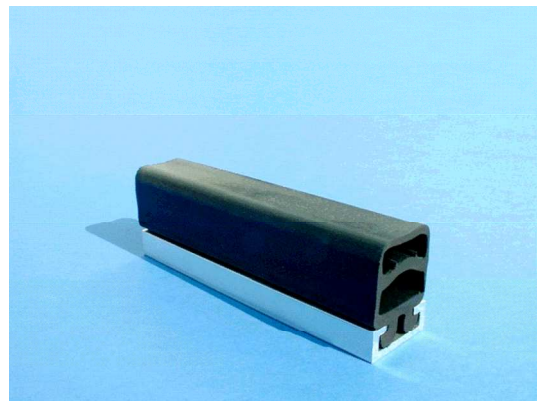
Height	15 mm
Width	25 mm
Material	NBR Rubber
Shore	65 ± 5
Response distance	
Test body Ø 10 mm	7 mm
Test body Ø 30 mm	7 mm
Deformation distance	
Test body Ø 10 mm / 150N	9 mm
Test body Ø 30 mm / 150N	8 mm
Over travel	
Test body Ø 10 mm	2 mm
Test body Ø 30 mm	1 mm
Responsive force	
Test body Ø 10 mm	32 N
Test body Ø 30 mm	36 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm

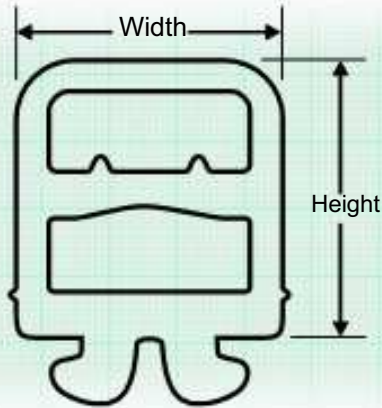


## Profile type 06 EPDM



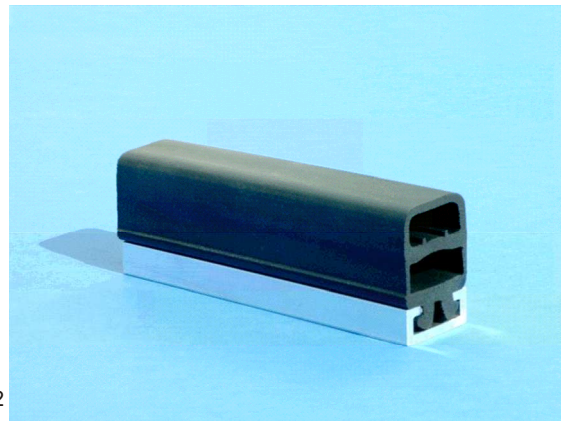
Height	25 mm
Width	25 mm
Material	EPDM rubber
Shore	60 ± 5
Response distance	
Test body Ø 10 mm	3 mm
Test body Ø 30 mm	2.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	18 mm
Test body Ø 30 mm / 150 N	12 mm
Over travel	
Test body Ø 10 mm	15 mm
Test body Ø 30 mm	9.5 mm
Response force	
Test body Ø 10 mm	9 N
Test body Ø 30 mm	12 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> One end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm

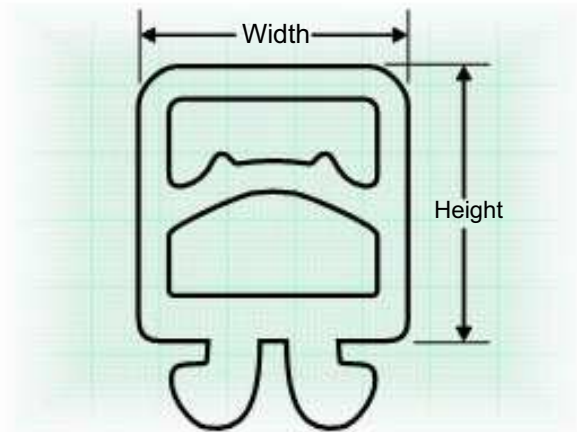




## Profile type 06 NBR

Height	28 mm
Width	25 mm
Material	NBR rubber
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	4.5 mm
Test body Ø 30 mm	4.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	19.5 mm
Test body Ø 30 mm / 150 N	14 mm
Over travel	
Test body Ø 10 mm	15 mm
Test body Ø 30 mm	9.5 mm
Response force	
Test body Ø 10 mm	47 N
Test body Ø 30 mm	58 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm



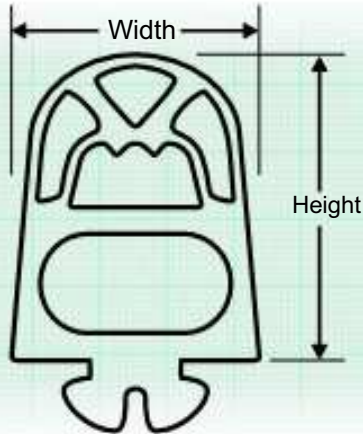


## Profile type 06 PVC

**Red Colour**

Height	25 mm
Width	25 mm
Material	PVC red
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	5.5 mm
Test body Ø 30 mm	6 mm
Deformation distance	
Test body Ø 10 mm / 150 N	18.5 mm
Test body Ø 30 mm / 150 N	20 mm
Over travel	
Test body Ø 10 mm	13 mm
Test body Ø 30 mm	14 mm
Responsive force	
Test body Ø 10 mm	18 N
Test body Ø 30 mm	19 N
Switching angle	± 45°
IP protection	IP 65
operating temperature	0° ... +50° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm

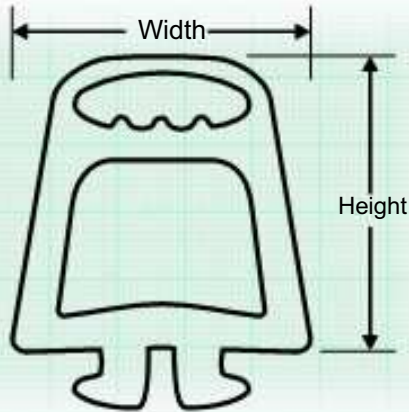




## Profile type 08 EPDM

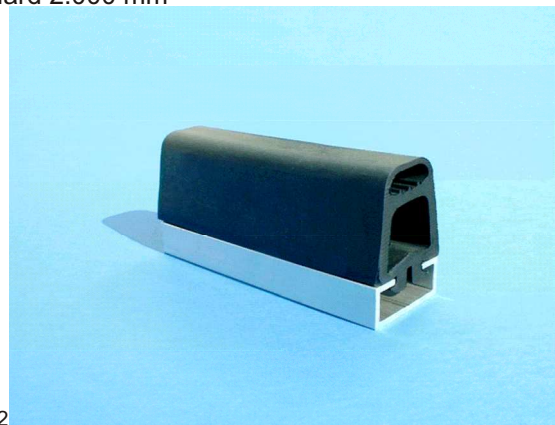
Height	46 mm
Width	35 mm
Material	EPDM rubber
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	11 mm
Test body Ø 30 mm	10 mm
Deformation distance	
Test body Ø 10 mm / 150 N	31 mm
Test body Ø 30 mm / 150 N	21.5 mm
Over travel	
Test body Ø 10 mm	20 mm
Test body Ø 30 mm	11.5 mm
Responsive force	
Test body Ø 10 mm	36 N
Test body Ø 30 mm	37 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm

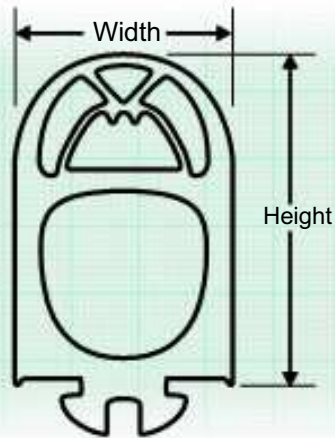




## Profile type 08 NBR

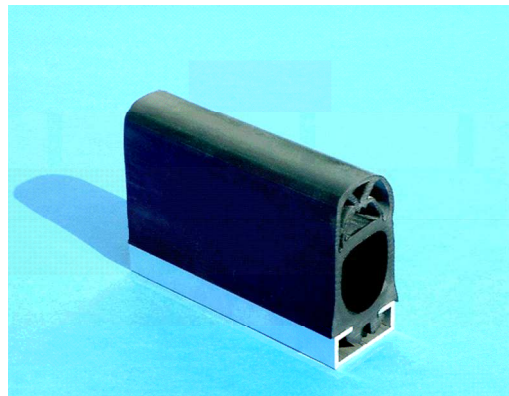
Height	36 mm
Width	35 mm
Material	NBR rubber
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	3 mm
Test body Ø 30 mm	2.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	8.5 mm
Test body Ø 30 mm / 150 N	7.5 mm
Over travel	
Test body Ø 10 mm	5.5 mm
Test body Ø 30 mm	5 mm
Responsive force	
Test body Ø 10 mm	12 N
Test body Ø 30 mm	10 N
Switching angle	± 45°
IP protection	IP 65
operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm

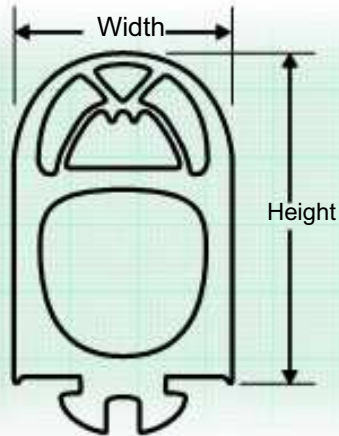




## Profile type 10 EPDM

Height	60 mm
Width	35 mm
Material	EPDM rubber
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	10 mm
Test body Ø 30 mm	9.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	39 mm
Test body Ø 30 mm / 150 N	38 mm
Over travel	
Test body Ø 10 mm	29 mm
Test body Ø 30 mm	28.5 mm
Responsive force	
Test body Ø 10 mm	18 N
Test body Ø 30 mm	20 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm

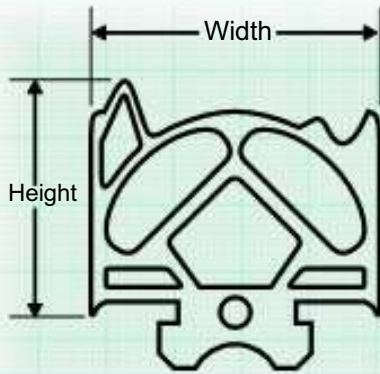




## Profile type 10 NBR

Height	60 mm
Width	35 mm
Material	NBR rubber
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	13.5 mm
Test body Ø 30 mm	12 mm
Deformation distance	
Test body Ø 10 mm / 150 N	36 mm
Test body Ø 30 mm / 150 N	29 mm
Over travel	
Test body Ø 10 mm	22.5 mm
Test body Ø 30 mm	17 mm
Response force	
Test body Ø 10 mm	28 N
Test body Ø 30 mm	21 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm



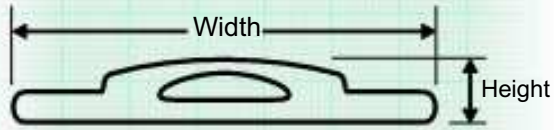


## Profile type 11 EPDM

Height	31 mm
Width	38 mm
Material	EPDM rubber
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	13.5 mm
Test body Ø 30 mm	12 mm
Deformation distance	
Test body Ø 10 mm / 150 N	36 mm
Test body Ø 30 mm / 150 N	29 mm
Over travel	
Test body Ø 10 mm	22.5 mm
Test body Ø 30 mm	17 mm
Responsive force	
Test body Ø 10 mm	28 N
Test body Ø 30 mm	21 N
Switching angle	± 65°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm <sup>2</sup> or one end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm



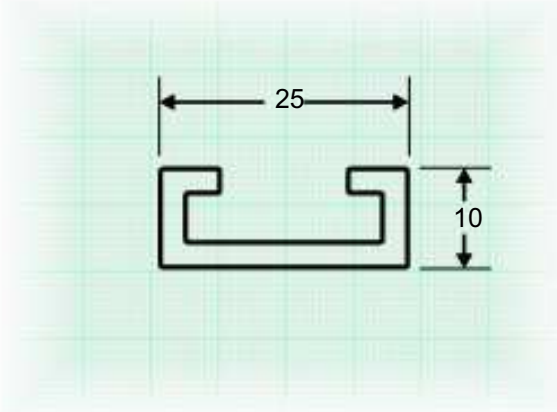
## Special switching element type: **BKS**



Height	15 mm
Width	96 mm
Material	Neoprene
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	4 mm
Test body Ø 30 mm	4 mm
Deformation distance	
Test body Ø 10 mm / 150 N	4.5 mm
Test body Ø 30 mm / 150 N	3 mm
Over travel	
Test body Ø 10 mm	0.5 mm
Test body Ø 30 mm	1 mm
Responsive force	
Test body Ø 10 mm	42 N
Switching angle	± 25°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	One end 4 x 0.38 mm <sup>2</sup> Length on demand, standard 2.000 mm



## Aluminium support profiles



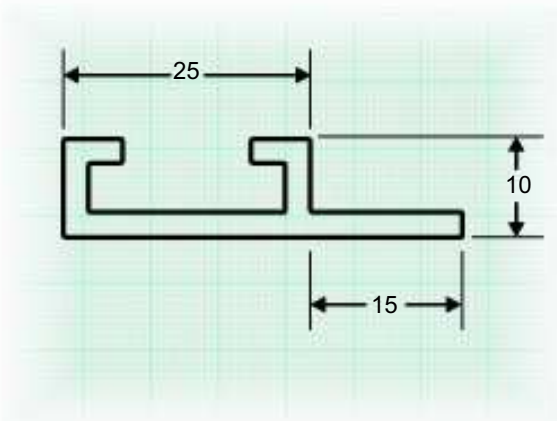
### Type 2510 for profiles 05 and 06

Height : 10 mm

Width : 25 mm

Size : 2.5 mm

Length : 6.000 mm max.



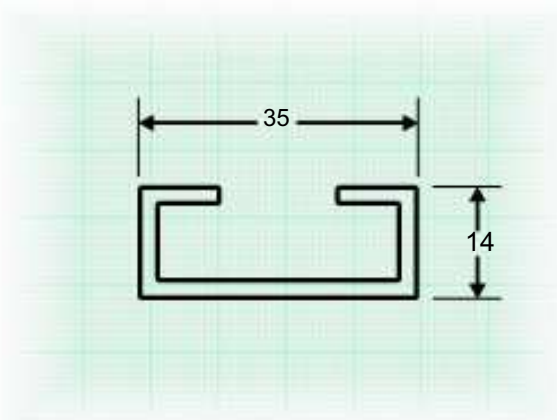
### Type 4010 for profiles 05 and 06

Height : 10 mm

Width : 40 mm

Size : 2.5 mm

Length : 6.000 mm max.



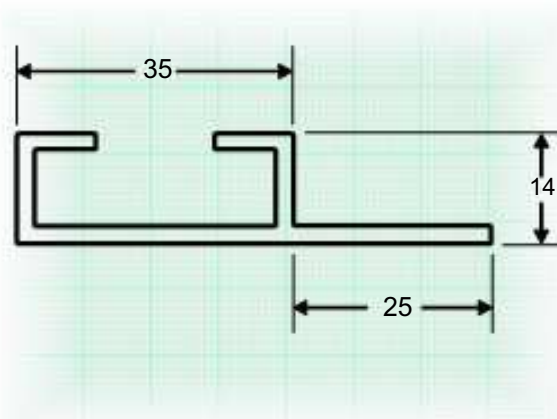
### Type 3514 for profiles 08 , 10 and 11

Height : 14 mm

Width : 35 mm

Size : 2 mm

Length : 6.000 mm max.



### Type 6014 for profiles 08, 10 and 11

Height : 14 mm

Width : 60 mm

Size : 2 mm

Length : 6.000 mm max.